Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: EOG Resources, Inc.
Well Name/Number: NBB 1-3229H
Location: SE SE Section 32 T30N R59E
County: Roosevelt**, MT; Field (or Wildcat)** Wildcat

Air Quality

(possible concerns)
Long drilling time: No, 30 to 40 days drilling time.
Unusually deep drilling (high horsepower rig): No, triple derrick rig to drill a single lateral Bakken Formation horizontal well test, 20,554'MD/10,567'TVD.
Possible H2S gas production: Slight chance of H2S, from the Mississippian Formations.
In/near Class I air quality area: No Class I air quality area, in the area of review.
Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under rule 75-2-211.

Mitigation:
X Air quality permit (AQB review)
X Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:_____

Comments: If there are existing pipelines for natural gas in the area then gas must be tied into a gathering system or if there isn't a gathering system nearby, associated gas can be flared under Board Rule 36.22.1220. This is a single lateral, 20,554'MD/10,567'TVD, Bakken Formation horizontal well.

Water Quality

(possible concerns)
Salt/oil based mud: Yes to intermediate casing string hole to be drilled with oil based invert drilling fluids. Horizontal lateral will be drilled with oil based invert drilling fluid. Surface casing hole will be drilled with freshwater and freshwater drilling mud system.
High water table: No high water table anticipated at this location.
Surface drainage leads to live water: No, closest drainage is an unnamed ephemeral tributary drainage which drains to a swampy area, about ¼ of a mile to the southwest from this location.
Water well contamination: No, closest water wells are about 1 mile and further from this location. Surface casing will be drilled with freshwater, casing set to 2061' and cemented back to surface.
Porous/permeable soils: No, sandy silty clay soils.
Class I stream drainage No, Class I stream drainages.

Mitigation:
X Lined reserve pit
X Adequate surface casing
__ Berms/dykes, re-routed drainage
X Closed mud system
X Off-site disposal of solids/**liquids** (in approved facility)
__ Other: _____

Comments: 2061' surface casing well below freshwater zones in adjacent water wells. Also, covering Base of the Fox Hills aquifer. Surface hole will be drilled with freshwater and freshwater mud to 2061'. Steel surface casing will be run and cemented to surface from 2061'.

Soils/Vegetation/Land Use

(possible concerns)
Steam crossings: None anticipated.
High erosion potential: Yes possible high erosion potential on cut slope, location will require a moderate cut, up to 16.2 and small fill, up to 8.4', required.
Loss of soil productivity: Slight, location to be restored after drilling well if well is nonproductive. If productive unused portion of wellsite will be reclaimed.
Unusually large wellsite: No, location is a large wellsite, 330'X450' in size.
Damage to improvements: Slight, surface use appears to be grazing land.
Conflict with existing land use/values: Slight

Mitigation
__ Avoid improvements (topographic tolerance)
__ Exception location requested
X Stockpile topsoil
__ Stream Crossing Permit (other agency review)
X Reclaim unused part of wellsite if productive
__ Special construction methods to enhance reclamation
X Other: Requires DEQ General Permit for Storm Water Discharge Associated with Construction Activity, under ARM 17.30.1102(28).

Comments: Access will be over existing county gravel roads, Snake Butte Road, #17 2049 and #17 10D1. About 1328'of new access road will be built off the existing county road into this location. Oil based drilling fluids will be recycled. Freshwater surface hole cuttings will be buried on site. Oil based drill cuttings will be buried in the lined cuttings pit. Completion pit fluids will be hauled to a permitted Class II saltwater disposal. Pit will be backfilled when dry. No concerns.

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences: Closest residence in the surrounding area is about 1 mile to the southeast from this location. The town of Bainville, Montana is about 16 miles to the southwest from this location.
Possibility of H2S: Slight possibility of H2S from Mississippian Formations.
Size of rig/length of drilling time: Triple drilling rig 30 to 40 days drilling time.

Mitigation:
X Proper BOP equipment
__ Topographic sound barriers
__ H2S contingency and/or evacuation plan
__ Special equipment/procedures requirements
__ Other:_____

Comments: Adequate surface casing cemented to surface with working BOP stack should mitigate any problems. Noise should not be a problems, sufficient distance from residence to rig should mitigate this.

Wildlife/recreation

(possible concerns)
Proximity to sensitive wildlife areas (DFWP identified): Medicine Lake National Wildlife Refuge is about 14.5 miles to the northwest from this location.
Proximity to recreation sites: Medicine Lake National Wildlife Refuge is about 14.5 miles to the northwest from this location.
Creation of new access to wildlife habitat: None
Conflict with game range/refuge management: None

Threatened or endangered Species: Threatened or endangered species listed in Roosevelt county by USFW service are Pallid Sturgeon, Piping Plover, Interior Lease Tern and Whooping Crane. Candidate species is the Sprague's Pipit. NH Tracker website list four (4) species of concern: Baird's Sparrow, Nelson's Sparrow, Chestnut-Collared Longspur and Whooping Crane.

Mitigation:

__ Avoidance (topographic tolerance/exception)

__ Other agency review (DFWP, federal agencies, DSL)

__ Screening/fencing of pits, drillsite

__ Other:_____

Comments: Slight, surface use appears to be grazing land. There maybe species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites None identified.

Mitigation

__ avoidance (topographic tolerance, location exception)

__ other agency review (SHPO, DSL, federal agencies)

__ Other:_____

Comments Slight, surface use appears to be grazing land. There maybe possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

Social/Economic

(possible concerns)

__ Substantial effect on tax base

__ Create demand for new governmental services

__ Population increase or relocation

Comments: Wildcat Bakken Formation, single lateral horizontal oil well test. No concerns.

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Remarks or Special Concerns for this site

Drill a wildcat single lateral Bakken Formation horizontal well test, 20,422'MD/10,534'TVD.

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Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected, only some short term impacts will occur.

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I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC):___/s/Steven Sasaki_____
(title:) Chief Field Inspector_____ _____
Date: May 23, 2012_____

Other Persons Contacted:

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_____
(Name and Agency)
Montana Bureau of Mines and Geology, Groundwater Information Center website._____
(subject discussed)
_Water wells in Roosevelt County_____
(date)
May 23, 2012

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Roosevelt County
(subject discussed)

May 23, 2012_____
(date)

Montana Natural Heritage Program Website (FWP)
(Name and Agency)
Heritage State Rank= S1, S2, S3, T30N R59E
(subject discussed)

_May 23, 2012_____
(date)

If location was inspected before permit approval:
Inspection date: _____
Inspector: _____
Others present during inspection:_____